



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.04.2010 Bulletin 2010/17

(51) Int Cl.:
B41J 2/175^(2006.01)

(43) Date of publication A2:
27.01.2010 Bulletin 2010/04

(21) Application number: **09175169.3**

(22) Date of filing: **28.02.2008**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA MK RS

(72) Inventors:
• **HATTORI, Shingo**
Nagoya-shi Aichi 467-8562 (JP)
• **NAKAMURA, Hirotake**
Nagoya-shi Aichi 467-8562 (JP)

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
08003712.0 / 2 039 520

(74) Representative: **Prüfer & Partner GbR**
European Patent Attorneys
Sohnckestrasse 12
81479 München (DE)

(71) Applicant: **Brother Kogyo Kabushiki Kaisha**
Nagoya-shi, Aichi 467-8561 (JP)

(54) **Ink cartridge, set of ink cartridges, and ink cartridge determination system**

(57) An ink cartridge includes a first signal blocking portion configured to selectively prevent a first signal from passing therethrough or to alter a path of the first signal. The ink cartridge also includes a second signal blocking portion configured to selectively prevent a second signal from passing therethrough or to alter a path of the second signal. The second signal blocking portion has a thickness determinative of whether the second signal blocking portion prevents the second signal from passing therethrough or alters the path of the second signal at a time that the first signal blocking portion initially prevents the first signal from passing therethrough or alters the path of the first signal.

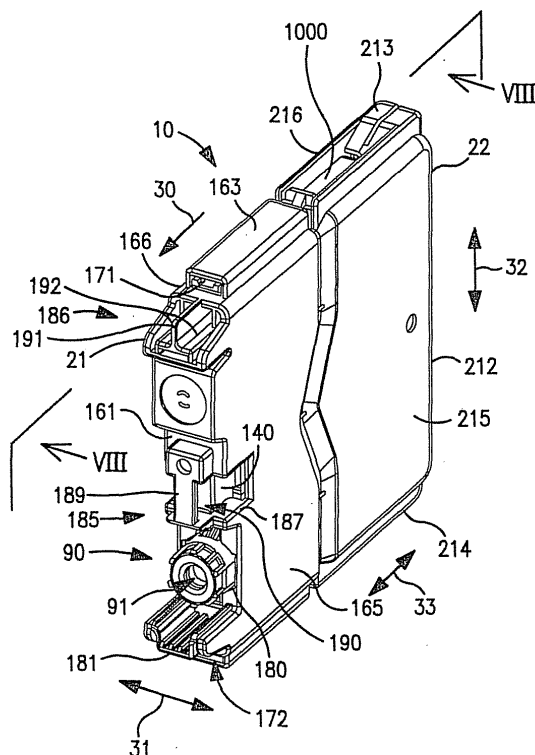


FIG. 2(a)

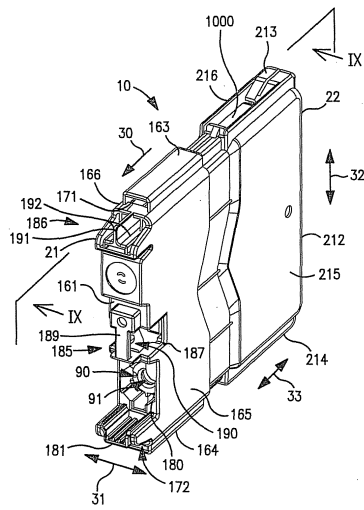


FIG. 2(b)

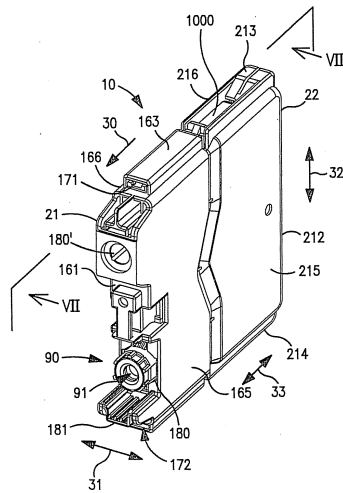


FIG. 2(c)

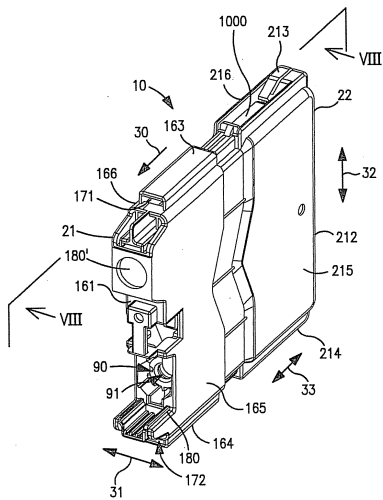


FIG. 2(d)



EUROPEAN SEARCH REPORT

Application Number
EP 09 17 5169

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 772 270 A (BROTHER IND LTD [JP]) 11 April 2007 (2007-04-11) * paragraph [0140]; figure 14 * * paragraphs [0152], [0158]; figures 18a-c * * paragraph [0109]; figure 18b * * paragraph [0251] - paragraph [0252] * * paragraph [0312] - paragraph [0313]; figure 42 * * paragraph [0379]; figure 56 * -----	1-8	INV. B41J2/175
X	EP 1 826 009 A2 (BROTHER IND LTD [JP]) 29 August 2007 (2007-08-29) * paragraph [0072]; figures 3, 4, 9b, 11 * -----	1-8	
X	US 7 188 939 B1 (SASAKI TOYONORI [JP]) 13 March 2007 (2007-03-13) * the whole document * -----	1-8	
X	EP 1 839 871 A (BROTHER IND LTD [JP]) 3 October 2007 (2007-10-03) * paragraphs [0032] - [0036], [0 64], [0 65]; figures 3, 9 * -----	1-8	TECHNICAL FIELDS SEARCHED (IPC) B41J
X	EP 1 839 873 A (BROTHER IND LTD [JP]) 3 October 2007 (2007-10-03) * abstract; figure 3 * -----	1	
X	EP 1 792 736 A (BROTHER IND LTD [JP]) 6 June 2007 (2007-06-06) * abstract; figures 14, 16 * -----	1	
X	US 2007/229615 A1 (HATTORI SHINGO [JP] ET AL) 4 October 2007 (2007-10-04) * paragraphs [0030] - [0032]; figure 1 * -----	1	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 March 2010	Examiner Adam, Emmanuel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

1
EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 17 5169

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-03-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1772270	A	11-04-2007	DE 602006000459 T2 08-01-2009 WO 2007037536 A1 05-04-2007 US 2007070146 A1 29-03-2007
EP 1826009	A2	29-08-2007	AT 365108 T 15-07-2007 AT 405429 T 15-09-2008 AT 454270 T 15-01-2010 CN 1663801 A 07-09-2005 DE 202005021209 U1 21-06-2007 DE 202005021768 U1 12-11-2009 DE 202005021805 U1 04-03-2010 DE 602005001410 T2 07-02-2008 EP 1570994 A1 07-09-2005 EP 1780026 A2 02-05-2007 ES 2287825 T3 16-12-2007 ES 2312147 T3 16-02-2009 US 2005195225 A1 08-09-2005
US 7188939	B1	13-03-2007	US 7226155 B1 05-06-2007 US 2007229616 A1 04-10-2007
EP 1839871	A	03-10-2007	AT 420770 T 15-01-2009 CN 101258034 A 03-09-2008 JP 4400590 B2 20-01-2010 JP 2007268793 A 18-10-2007 WO 2007116546 A1 18-10-2007
EP 1839873	A	03-10-2007	CN 101015992 A 15-08-2007 DE 602006000196 T2 14-08-2008 JP 2007261051 A 11-10-2007
EP 1792736	A	06-06-2007	NONE
US 2007229615	A1	04-10-2007	NONE

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82